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 TI Transdermal **delivery** and accumulation of indomethacin in
 subcutaneous tissues in rats
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 PB Royal Pharmaceutical Society of Great Britain
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 Section cross-reference(s): 1
 AB Oral non-steroidal anti-inflammatory drugs (NSAIDs) are effective
 pharmacotherapy for a wide variety of painful, inflammatory disorders.
 Development of an efficient means of topical administration of NSAIDs
 could increase local soft-tissue and joint concns. while reducing systemic
 distribution of the drug, thereby reducing side-effects. We studied the
 effects of a novel topical penetration enhancer for lipophilic compds., a
 trans-phase **delivery** system (TPDS), a solution of benzyl alc.,
 isopropanol and acetone, on the distribution of indomethacin in various
 tissues locally and remote from the site of application. We compared the
 TPDS with a 50:50 (volume/volume) mixture of propylene glycol and ethanol, a
 commonly used penetration enhancer, and with oral administration. The
 TPDS was significantly superior to the other approaches at achieving high
 local-tissue concns. in the vicinity of the site of application. In
 addition, comparison of these 2 carrier systems seems to clarify the
 different aqueous and hydrophobic pathways of drug penetration which emerge
 from various exptl. findings and theor. considerations. This non-aqueous
 solvent system, and benzyl alc. in particular, because of its unique
 physicochem. and solvating characteristics, might be able to deliver
 therapeutic levels of indomethacin to tissues close to the site of
 application in a safer and more effective manner than presently accepted
 forms of **delivery**.
 ST transdermal **delivery** indomethacin subcutaneous tissue
 IT Connective tissue
 (s.c.; transdermal **delivery** and accumulation of indomethacin
 in s.c. tissues)
 IT Drug bioavailability
 Kidney
 Liver
 (transdermal **delivery** and accumulation of indomethacin in
 s.c. tissues)
 IT Drug **delivery** systems
 (transdermal; transdermal **delivery** and accumulation of
 indomethacin in s.c. tissues)
 IT 53-86-1, Indomethacin
 RL: BPR (Biological process); BSU (Biological study, unclassified); THU
 (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
 (transdermal **delivery** and accumulation of indomethacin in
 s.c. tissues)
 IT 67-63-0, Isopropanol, biological studies 67-64-1, Acetone, biological
 studies 100-51-6, Benzyl alcohol, biological studies
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (transdermal **delivery** and accumulation of indomethacin in
 s.c. tissues)
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